

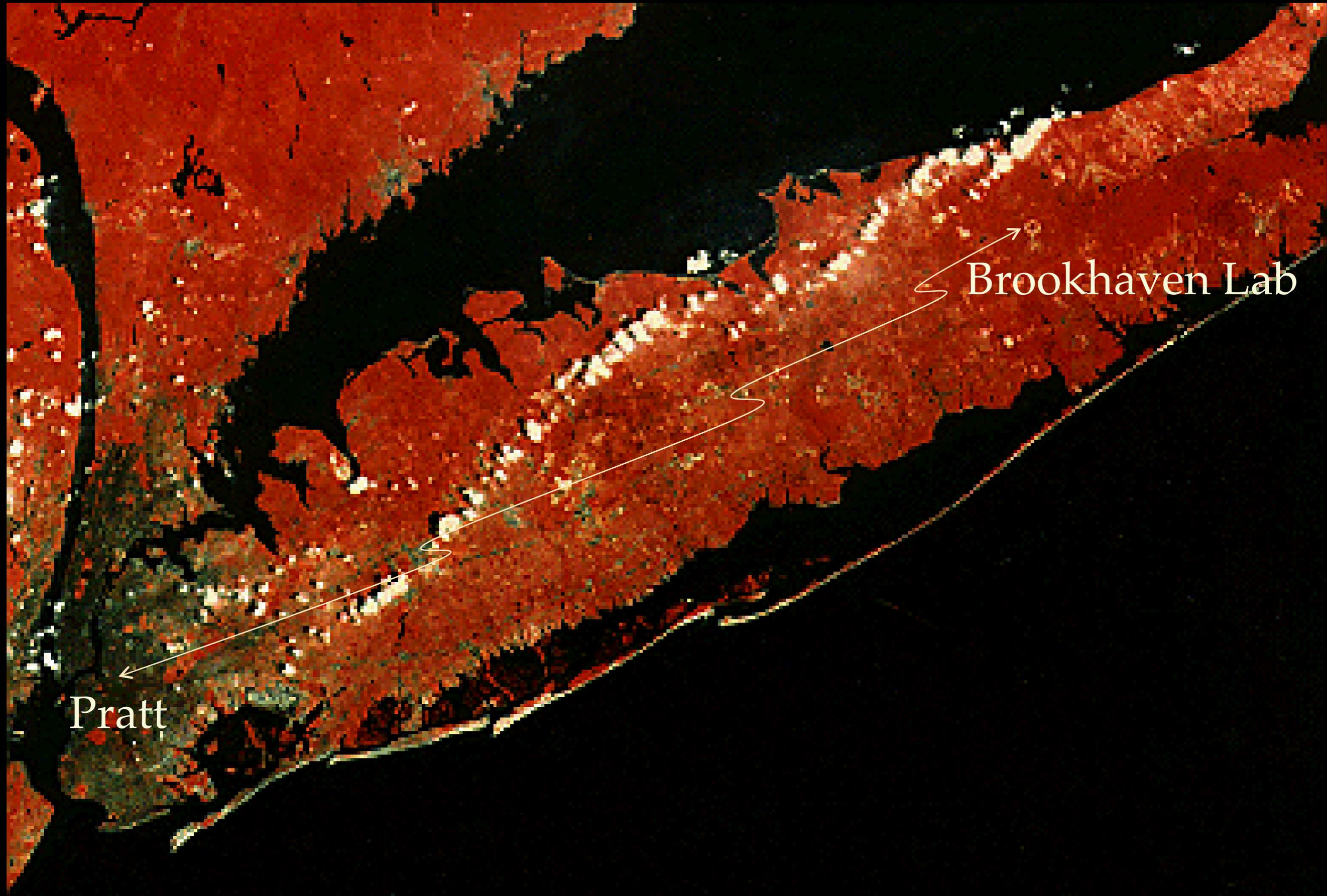
Smashing Matters

the making of a documentary



Ágnes Mócsy
Pratt Institute

RHIC / AGS Users Meeting
BNL 27 June 2013



Brookhaven Lab

Pratt

Pratt Institute



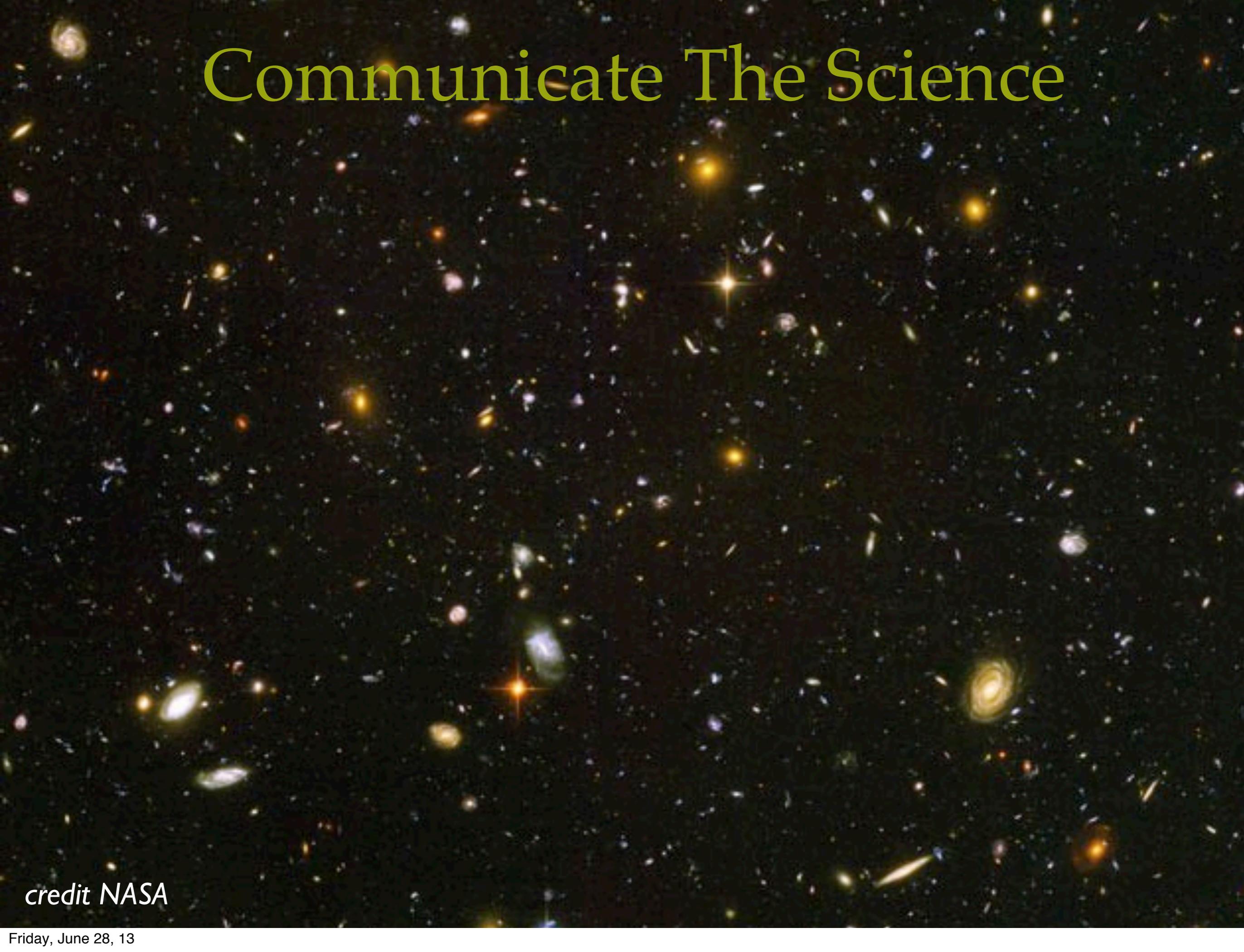
Pratt

Why make a documentary about physicists at a conference ?



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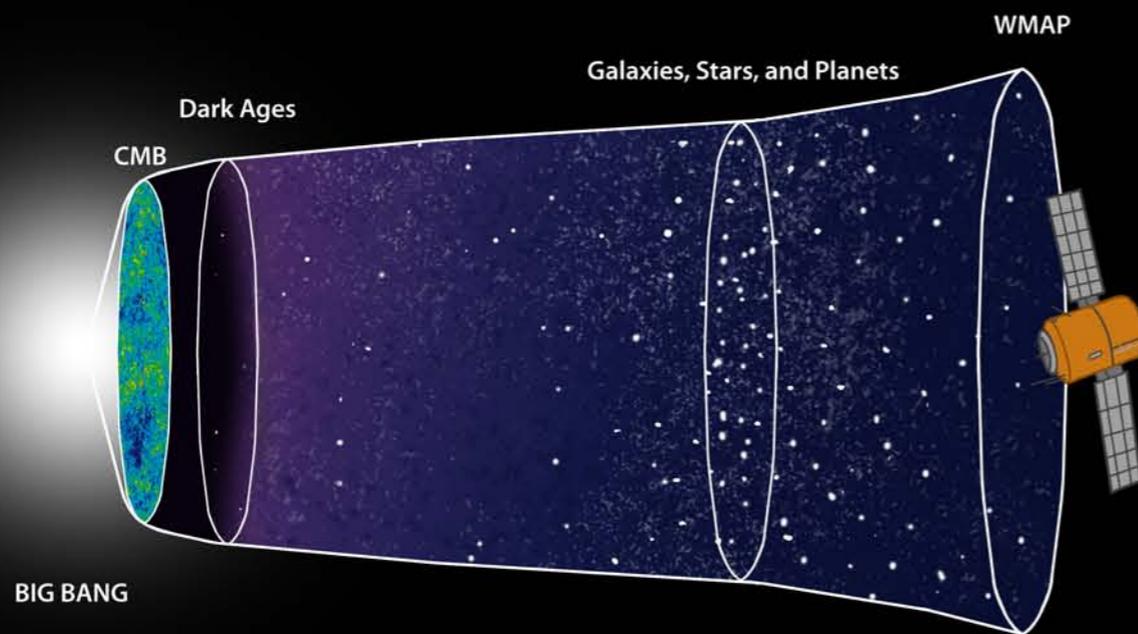
Communicate The Science

A deep-field astronomical image showing a vast field of galaxies. The galaxies are scattered across the frame, appearing in various colors including yellow, orange, blue, and purple. Some are bright and clear, while others are faint and distant. The background is a dark, starry space.

credit NASA

Communicate The Science

THE UNIVERSE



RHIC

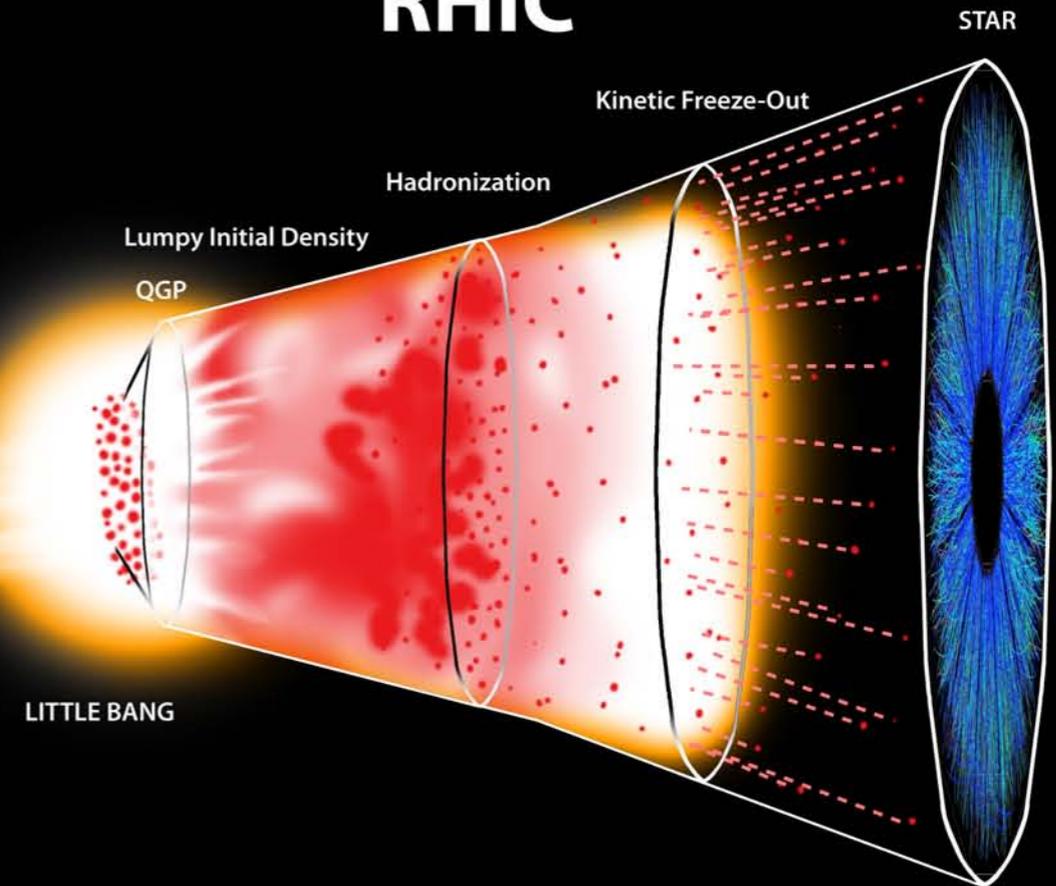
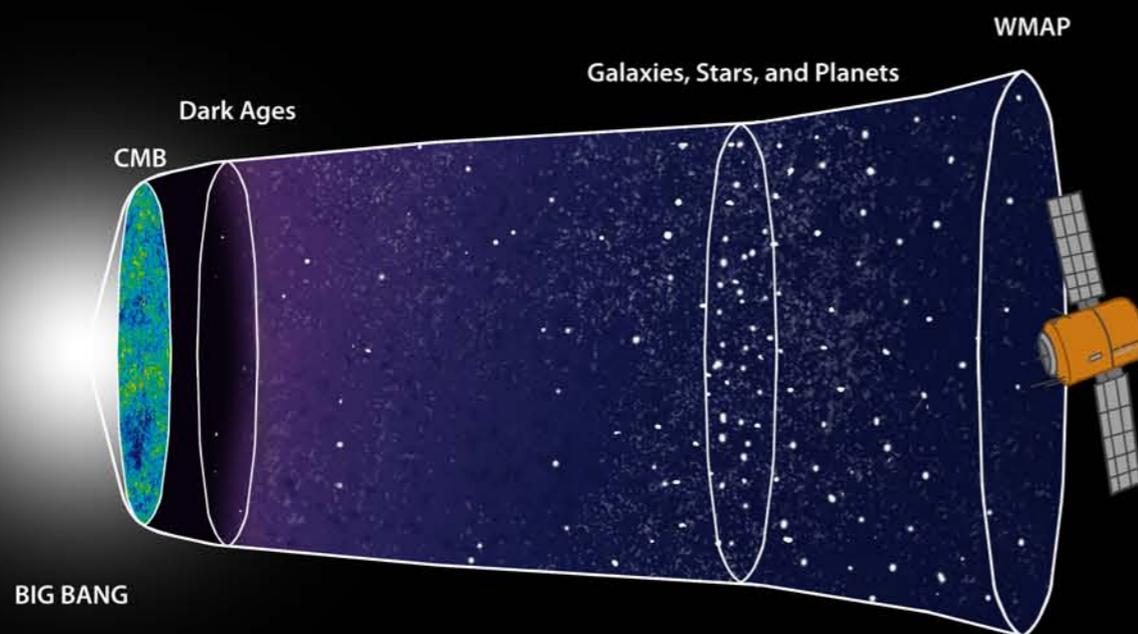


illustration by Alexander Doig

Communicate The Science

THE UNIVERSE



RHIC

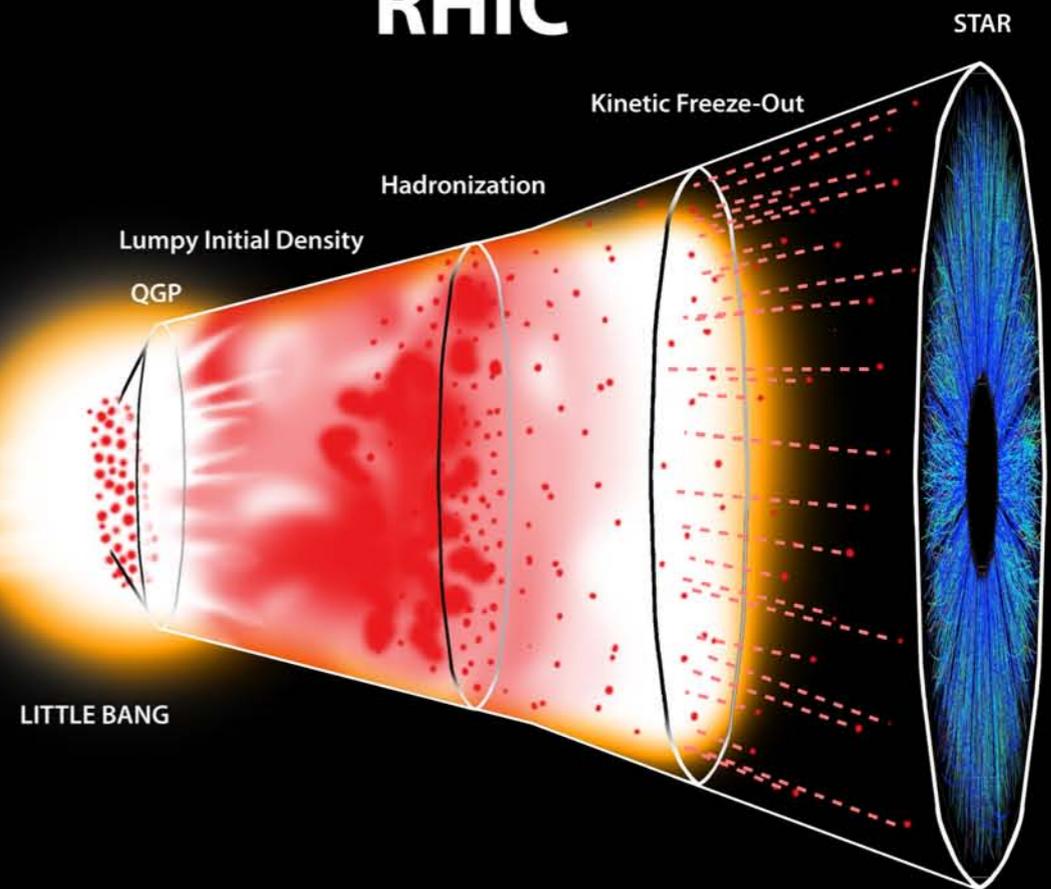
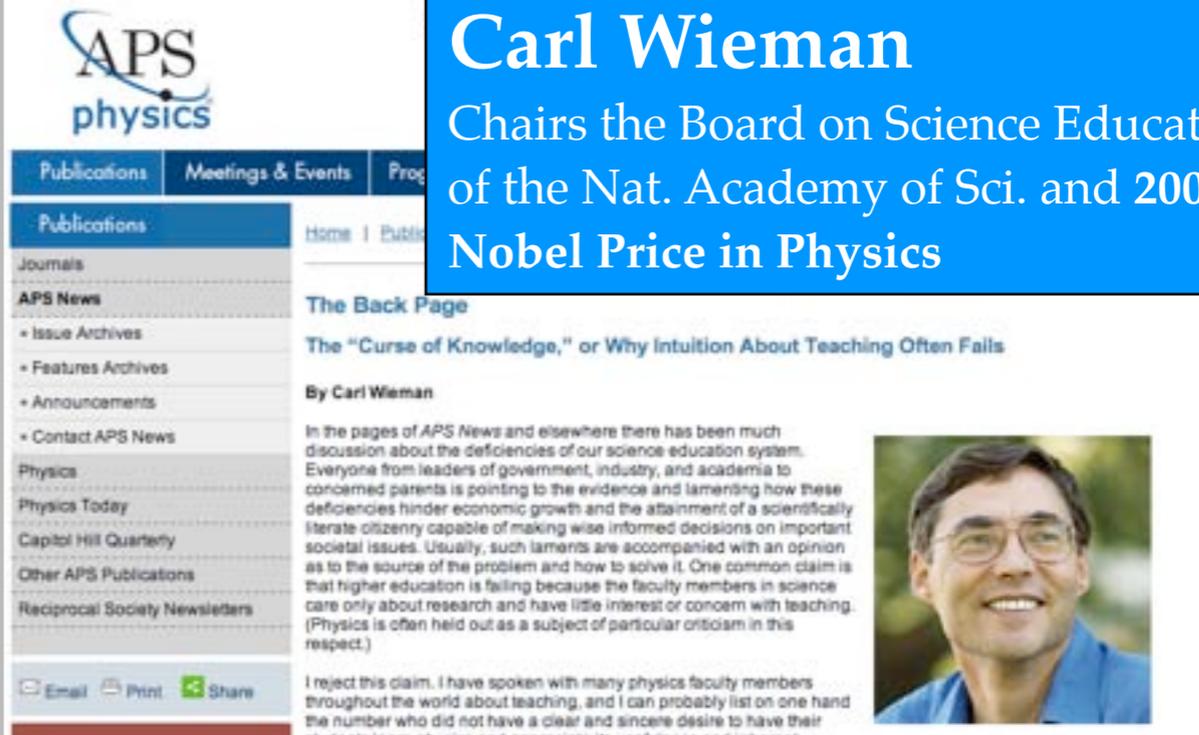


illustration by Alexander Doig

This is not science fiction.
This is science.

We Have Bad Communication

“consistently measured that student beliefs about the nature of physics, how it is learned and used, and how physics knowledge is established, on average, become less like those of a scientist after completing typical introductory college physics courses.”



The screenshot shows the APS physics website. The top navigation bar includes 'Publications', 'Meetings & Events', and 'Programs'. The main content area features a sidebar with links to 'Journals', 'APS News', 'Issue Archives', 'Features Archives', 'Announcements', and 'Contact APS News'. The main article is titled 'The Back Page: The "Curse of Knowledge," or Why Intuition About Teaching Often Fails' by Carl Wieman. A portrait of Carl Wieman is visible on the right side of the article.

Carl Wieman

Chairs the Board on Science Education of the Nat. Academy of Sci. and 2001 Nobel Prize in Physics



“our physics courses are actually teaching many students that physics knowledge is just the claim of an arbitrary authority, that physics does not apply to anything outside the classroom, and that physics problem solving is just about memorizing answers to irrelevant problems.”

Growing Anti-Science Movement

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

Lamar Smith
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Subcommittee on Oversight

Rep. Paul Broun (R-Ga)
Chairs Subcommittee on Oversight

[Click Here to report to the Subcommittee instances of waste, fraud, or abuse](#)

The Subcommittee on Oversight has general and special investigative authority on all matters within the jurisdiction of the Committee on Science, Space, and Technology.

Subcommi

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Members

Republican Members

Paul Broun, GA, Chairman
F. James Sensenbrenner (R-Wisconsin)
Bill Posey (R-Florida)
David Schweikert (R-Arizona)
Kevin Cramer (R-North Dakota)

All that stuff I was taught about evolution and embryology and the big bang theory, all that is lies straight from the pit of Hell,"

I don't believe that the earth's but about 9,000 years old. I believe it was created in six days

The Committee on Science, Space and Technology is a committee of the United States House of Representatives. It has jurisdiction over non-defense federal scientific research and development. Specifically, the committee has partial or complete jurisdiction over the following federal agencies: NASA, the Department of Energy, EPA, ATSDR, NSF, FAA, NOAA, National Institute of Standards and Technology, FEMA, the U.S. Fire Administration, and United States Geological Survey.

This does not work so well.



Success of Evidence-Based Reasoning



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A Personal Motivation

Perceptions

If you ask middle school students what a scientist looks like, they'll tell you he's an old white guy with crazy hair, glasses and a lab coat.

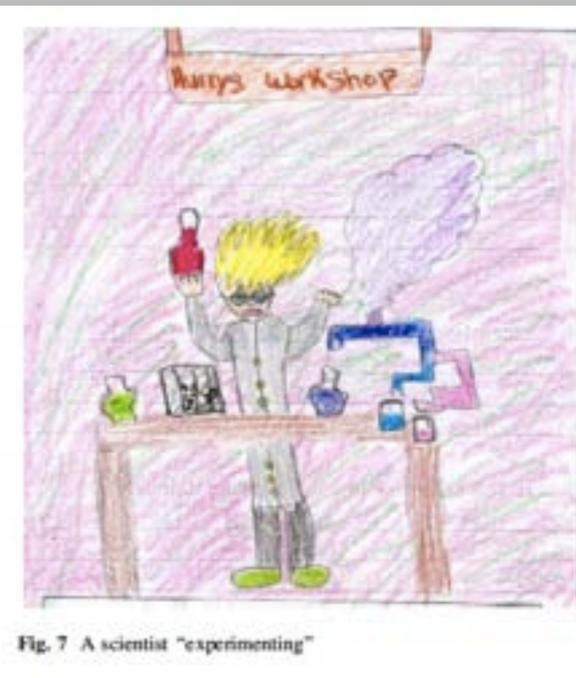
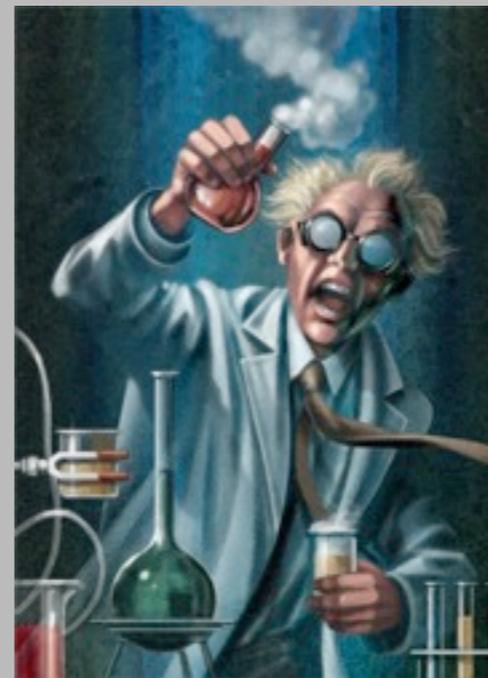
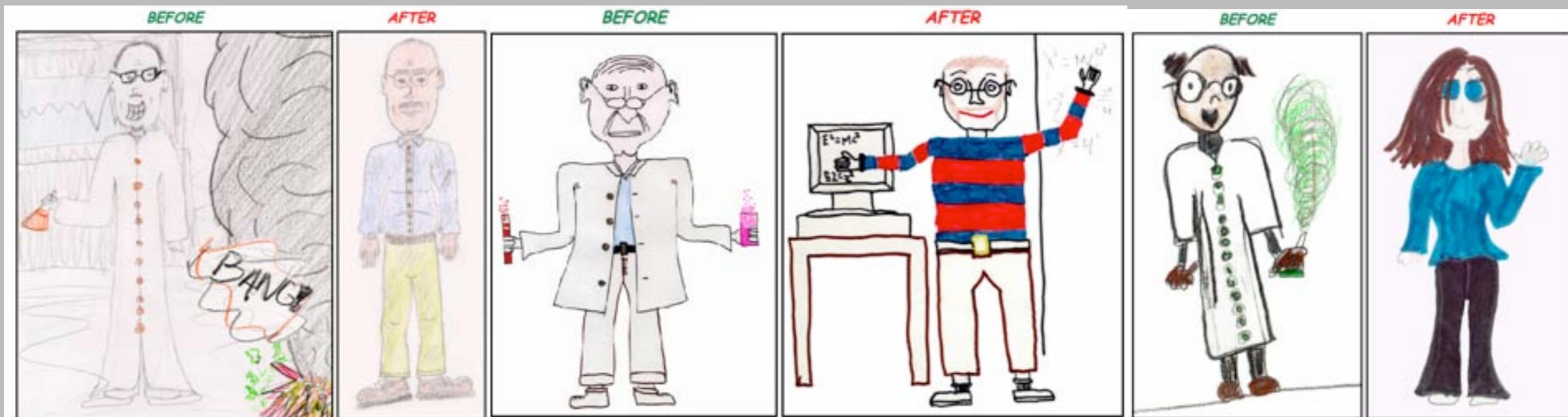


Fig. 7 A scientist "experimenting"

Changing Perceptions

People connect with emotions and personal stories. We can communicate our science better if we create a human connection with our audience.



What will this documentary be?



Pratt students talking to physicists at BNL



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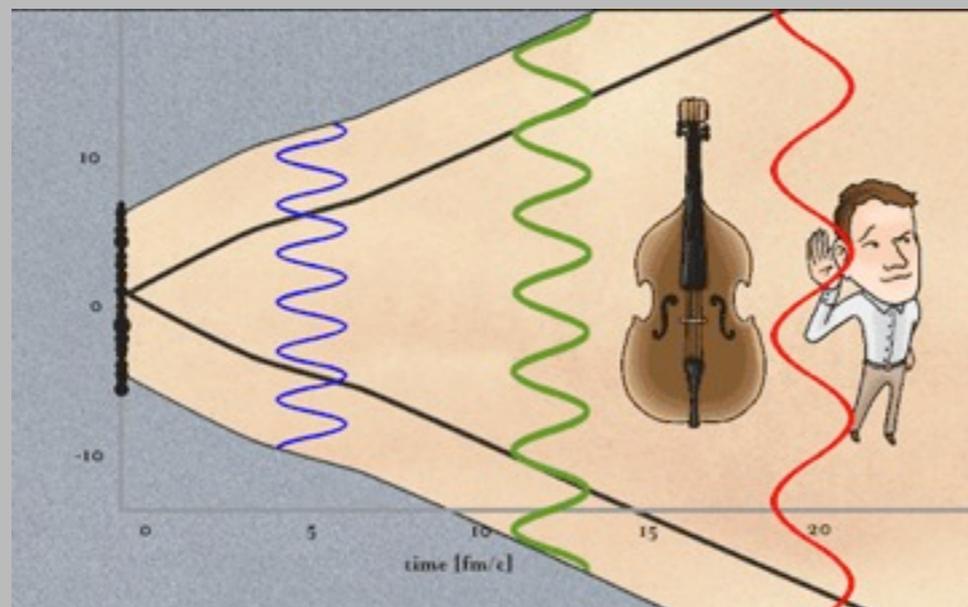
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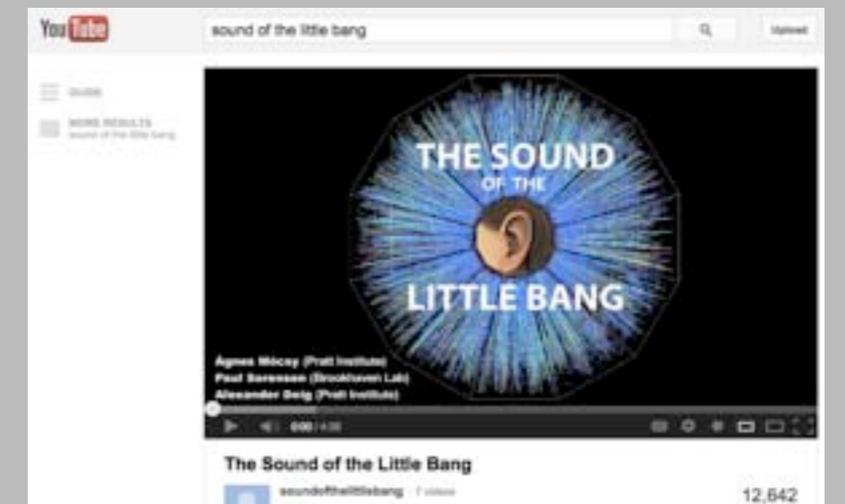
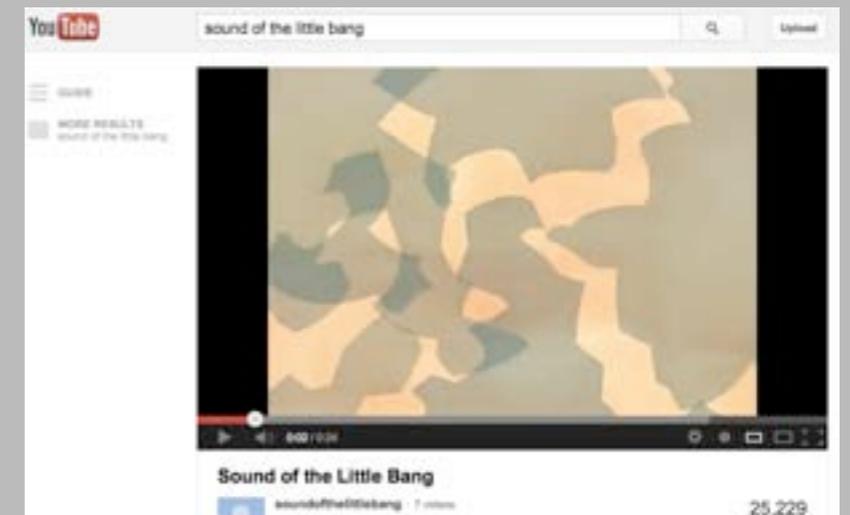
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THE SOUND of the LITTLE BANG

Ágnes Mócsy with Alex Doig and Paul Sorensen



www.soundofthelittlebang.com



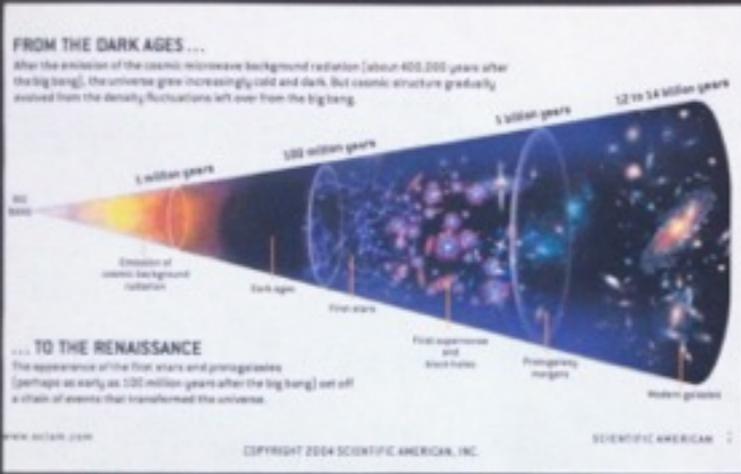
[watch the video](#)

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THE COSMOS CREATION COLLECTION



The Cosmos Creation Collection by Dalitza Babilonia *Fashion design*



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The Crew

The Smashingmatters crew:



Lourenca Alencar
Camera Operator
Pratt film student and keen
observer

Samantha Kahrar
Camera Operator
Pratt Film Major and gifted
ventriloquist



Adam Warner
Story Development
multi-media journalist, graduate student
at CUNY School of Journalism, science
writer, Pratt graduate, poet and
gardener

Paul Sorensen
Story Development
physicist, science advocate and
fearless adventurer



Nicole Eure
Camera Operator
film-maker, collector and dealer of fine
vintage objects, and amazing vegan
chef

Justin Eure
Assistant Director
multimedia journalist, film-maker
science writer, science advocate and
spectacular nerd



www.smashingmatters.org

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Lourenca and Samantha



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Lo, Sam, and Max



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Adam



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Justin



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Nicole and Paul



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Our Gear



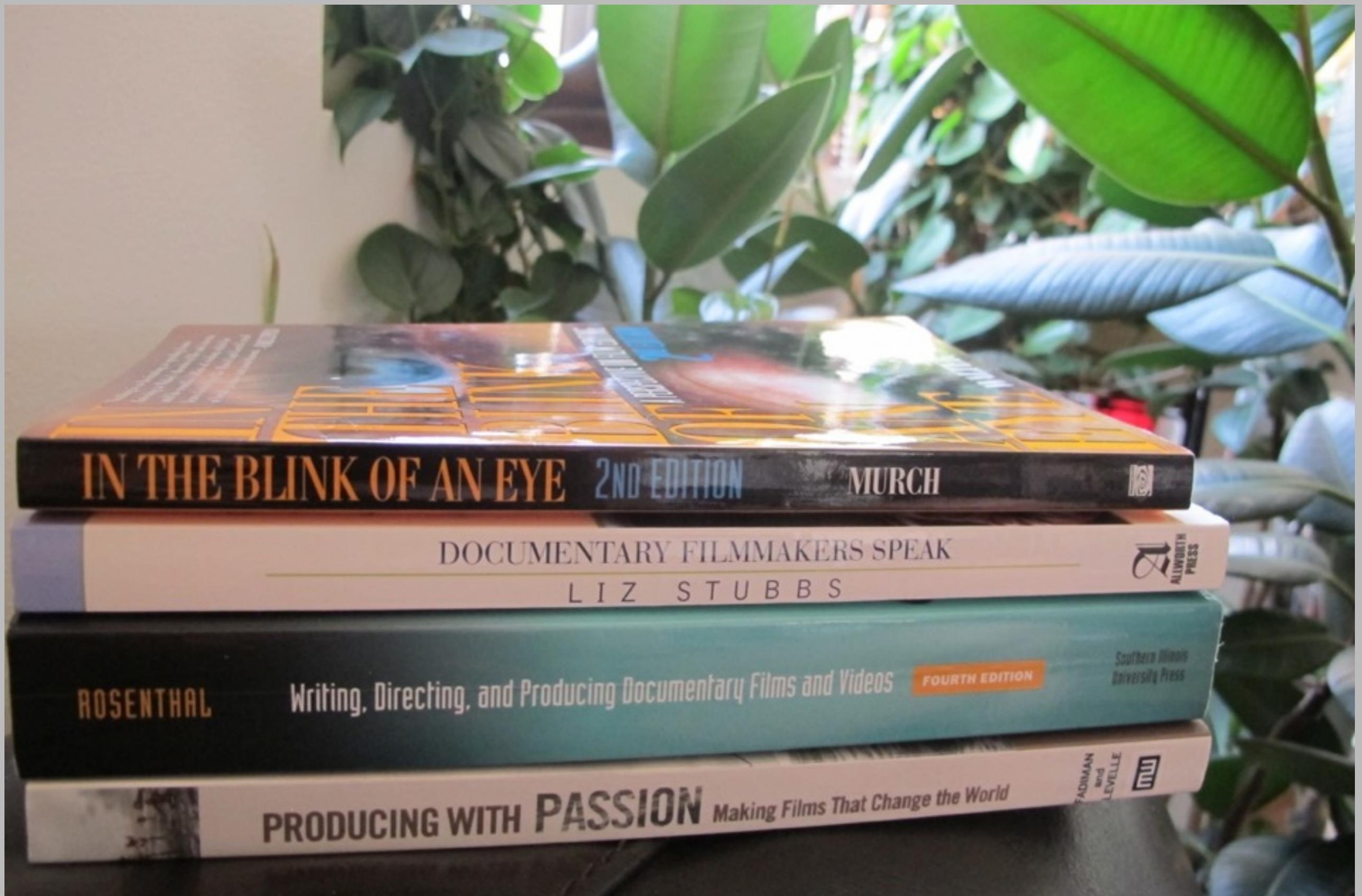
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Our Gear



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My Readings



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Thanks



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Thanks



Berndt Mueller



Dean Andrew Barnes



Steve Vigdor



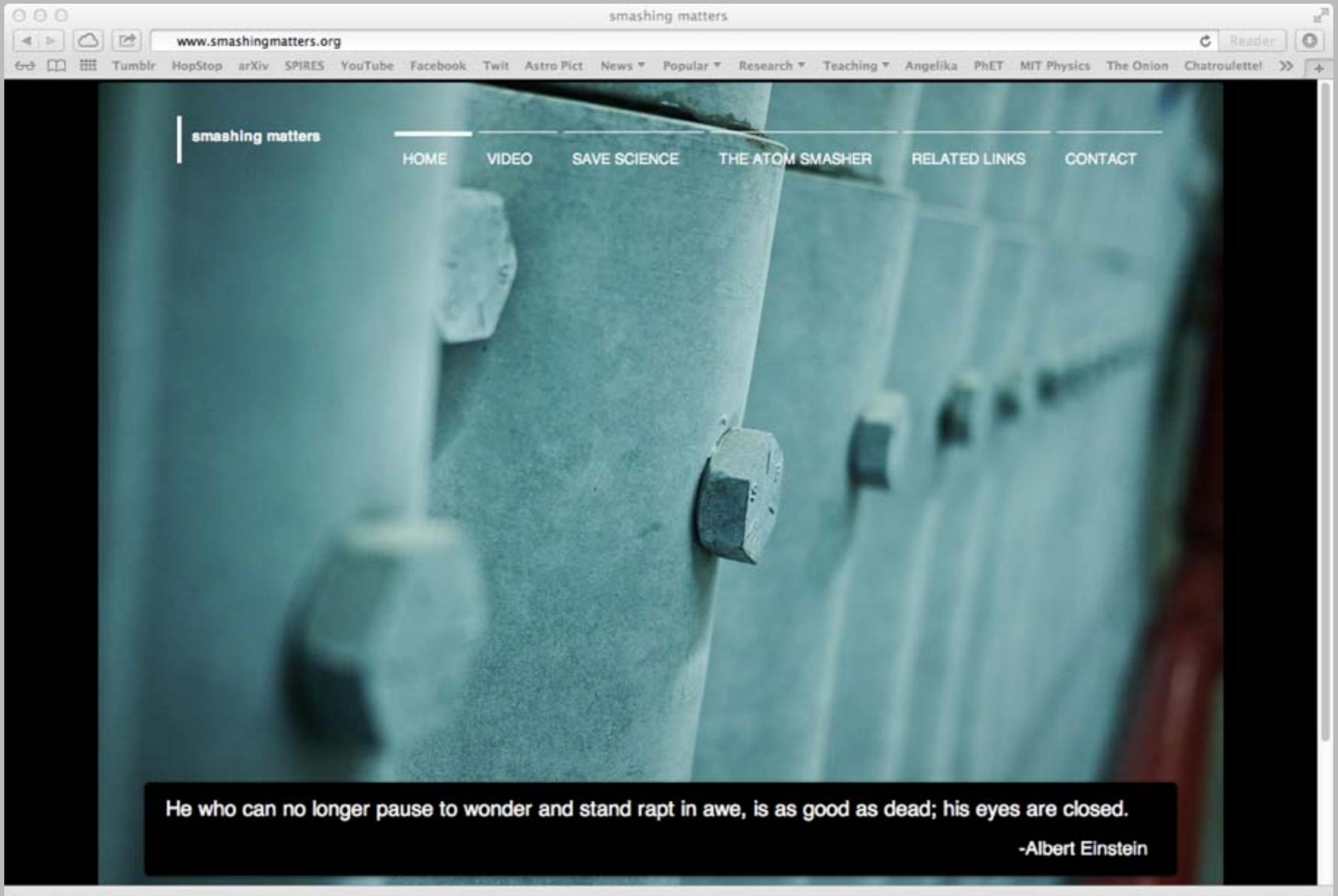
John Harris



Liz Mogavero

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[watch on youtube](#)

The screenshot shows a web browser window with the URL www.smashingmatters.org/#/video/cavq. The browser's address bar and tabs are visible at the top. The website's navigation menu includes links for HOME, VIDEO, SAVE SCIENCE, THE ATOM SMASHER, RELATED LINKS, and CONTACT. Below the navigation, the page title "smashing matters" is displayed, followed by the subtitle "The far-reaching impacts and incalculable value of basic science, as told by the scientists at the last atom smasher." A large video player is the central focus, showing a close-up of a large, cylindrical, metallic particle accelerator component. A play button is overlaid on the video. At the bottom of the video player, there is a progress bar showing 0:00 / 6:43. Below the video player, there is a social media share button for Facebook, a button labeled "meet the physicists from the film", and a link to "watch on Vimeo".

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Friday, June 28, 13

The End